

ABSTRACT

The present invention provides polypeptides comprising a stabilized trimer of the carboxyl-terminal core region of the ectodomain of an enveloped virus, such as HIV. A subject polypeptide comprises three monomers that form a trimeric coiled coil in a prefusogenic conformation of an enveloped virus, such as HIV. The subject polypeptides are useful as vaccines against enveloped viruses such as HIV, which vaccines are also provided. The present invention also provides methods of vaccinating an individual to prevent or treat HIV infection or prevent or treat infection by another enveloped virus, using a subject vaccine. Antibodies or binding portions thereof raised against a C-terminus trimeric coiled coil motif of an HIV gp41 ectodomain, or carboxyl-terminal core region of the ectodomain of another enveloped virus, are also provided as are methods of making such antibodies. Methods for detecting HIV or other enveloped viruses in a sample, as well as methods of screening for drugs which can inhibit HIV infection or other enveloped virus infection, are also provided by the present invention.